WHAT IS CLAIMED IS:

1. A method for reducing the altitudinal errors and run-out of a spindle motor having a loading surface, comprising the following steps:

Mounting a material layer on the loading surface; and

Applying a surface treatment to the material layer until the average run-out of the surface of the material layer generated during spindle motor's running achieves a first expected value, and the distance between the surface of the material layer and one end of a shaft of the spindle motor achieves a second expected value.

2. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 1, wherein the material for the mounted material layer comprises a material selected from the group comprising polymer material, metal material, and compound material.

3. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 1, wherein the step of mounting the material layer on the loading surface is done by an adhesive.

4. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 1, wherein the step of applying a surface treatment to the material layer is done with the shaft employed as a working spindle.

5. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 1, wherein the surface treatment is turning.

6. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 1, further comprising the following step:

mounting an anti-sliding slice on the material layer.

7. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 1, wherein the first expected value is below 10^{-2}mm.

8. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 1, wherein the standard deviation of the second expected value is below 4×10^{-3}mm.

9. A method for reducing the altitudinal errors and run-out of a spindle motor, comprising the following steps:

Providing a spindle motor having a rotor and a shaft;

mounting a material layer on the surface of the rotor; and

employing the shaft as a working spindle and applying a mechanic processing on the surface of the material layer until the average run-out of the surface of the material layer generated during spindle motor's running achieves a first expected value, and the distance between the surface of the material layer and the end of the shaft achieves a second expected value.

10. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 9, wherein the material of the material layer comprises a polymer material.

11. The method for reducing the altitudinal errors and run-out of a spindle motor as

claimed in claim 10, wherein the polymer material layer comprises a material selected from the group comprising polycarbonate (PC) and polyethylene terephthalate (PET).

12. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 9, wherein the mechanic processing comprises a cutting processing.

13. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 12, wherein the cutting processing comprises turning.

14. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 9, further comprising the following step:

mounting an anti-sliding slice on the material layer.

15. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 9, wherein the first expected value is below 10^{-2}mm.

16. The method for reducing the altitudinal errors and run-out of a spindle motor as claimed in claim 9, wherein the standard deviation of the second expected value is below 4×10^{-3}mm.

17. A slim-type spindle motor, including:

a shaft;

a rotor, wherein a hole is provided in the middle of the rotor for accommodating the shaft;

a material layer mounted on the surface of the rotor with the surface of the material

layer being surface treated; and

an anti-sliding slice mounted on the material layer.

18. The slim-type spindle motor as claimed in claim 17, wherein the average run-out of the surface of the material layer is below 10^{-2}mm, and the distance between the surface of the material layer and one end of the shaft achieves an expected value.

19. The slim-type spindle motor as claimed in claim 17, wherein the material of the material layer comprises a material selected from the group comprising polymer material, metal material, and compound material.